

Publication

**EP 0863415 A3 19981014**

Application

**EP 98400535 A 19980306**

Priority

**JP 5297997 A 19970307**

Abstract (en)

[origin: EP0863415A2] A base polymer is mixed with a non-polymerizable compound having a higher refractive index to form a fiber material. This material is continuously transformed into a fiber (5) in a fiber-preparing unit (1). The fiber is dipped in diffusion tanks (T1 ... Tn) containing a monomer (9) so as to diffuse the monomer into the fiber, and cured in a heater (15) so as to polymerize the monomer (9). By alternately repeating this procedure, the monomer (9) and the non-polymerizable compound are diffused in the fiber (5) and form a graded refractive index. Next, the fiber is drawn, coated with a cladding and coiled. This method can be performed with a high running ratio, minimizing the necessity of scaling-up of the facilities when the production is increased, and easily confers a desired index grading on the fiber. Likewise, the method allows manufacturing continuously, an graded-index plastic optical-fiber (3) with a desired length and of constant quality. <IMAGE>

IPC 1-7

**G02B 6/16**

IPC 8 full level

**G02B 6/00** (2006.01); **B29C 48/05** (2019.01); **B29D 11/00** (2006.01); **G02B 6/028** (2006.01); **B29C 48/00** (2019.01)

CPC (source: EP US)

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Citation (search report)

- [A] US 3999834 A 19761228 - OHTOMO KOICHIRO, et al
- [A] EP 0752598 A1 19970108 - KOIKE YASUHIRO [JP]
- [A] WO 9636478 A1 19961121 - AKZO NOBEL NV [NL], et al
- [A] US 5555525 A 19960910 - HO BANG C [TW], et al
- [AD] PATENT ABSTRACTS OF JAPAN vol. 095, no. 004 31 May 1995 (1995-05-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 010, no. 124 (P - 454) 9 May 1986 (1986-05-09)
- [PX] PATENT ABSTRACTS OF JAPAN vol. 098, no. 001 30 January 1998 (1998-01-30)

Cited by

DE102013009169A1; EP1080871A1; DE102013009169B4

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